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ABSTRACT

A comparison was made of the verbal praise and criticism behaviors of teachers instructing in different types of classrooms. Fifty-seven teachers were observed in their various seventh and eighth grade classrooms: (1) nonhandicapped, small class size (5-15 students); (2) nonhandicapped, large class size (20 or more students); (3) special (students with learning disabilities); and (4) tutoring (one teacher for one or two students). Comparisons were made by rating the number of praise and criticism incidents initiated by the teachers, differences of teachers responses to boys and girls, and amount of praise and criticism directed toward groups of different sizes. Findings indicated that the verbal praise and criticism behaviors of teachers in one type of classroom did not significantly differ from those of teachers in another type of classroom. Although the majority of teachers used more praise than criticism, it appeared that they were not systematically using praise to manage student behavior but that their praise and criticism were reactions to student behavior. Praise was equally distributed among girls and boys; however, more criticism was directed toward boys, but not in significant amounts. Teachers were inclined to level criticism more frequently toward groups of students rather than to individuals. Among suggestions for future research on this topic is that an exploration be made of teacher verbal praise and criticism behaviors between beginning teachers and experienced teachers. (JD)

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ED220459

A Comparison of the Verbal Praise-Criticism Behavior of Teachers Instructing in Junior High Regular Classrooms with a Small Class-size, Regular Classrooms with a Large Class-size, Special Classrooms and Tutoring Classrooms[1]

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ABSTRACT

Crabtree, Vaun C., M.S. in Ed., August 1982

A COMPARISON OF THE VERBAL PRAISE-CRITICISM BEHAVIOR OF TEACHERS INSTRUCTING IN JUNIOR HIGH REGULAR CLASSROOMS WITH A SMALL CLASS-SIZE, REGULAR CLASSROOMS WITH A LARGE CLASS-SIZE, SPECIAL CLASSROOMS, AND TUTORING CLASSROOMS

Faculty Advisor: Gerald W. O'Neil, Ph.D.

PROBLEM. The current investigation is based on the finding that within the repertoire of teacher behaviors which can create a classroom environment which is conducive to learning is the application of social reinforcements for student behaviors. Specifically, praise has been identified as a desirable teacher behavior and the excessive use of criticism has been deemed an undesirable behavior. The extent to which these behaviors occur in various types of classrooms has not been investigated thoroughly.

The primary aim of this investigation was to compare the verbal praise and criticism behavior of teachers instructing in different types of classrooms. The types of classrooms were the regular classroom with a small class-size (ie. 5-15 students), the regular classroom with a large class-size (ie. 20 or more students), the special classroom (students with learning disabilities), and the tutoring classroom (one professional teacher to one or two students). Comparisons of the four groups of teachers were made on seven variables. The variables were (a) the number of praise incidents, (b) the number of criticism incidents, (c) the praise to criticism ratio, (d) the equality of distribution of teacher verbal praise to boys and girls, (e) the equality of distribution of teacher verbal criticism to boys and girls, (f) the percent of praise directed toward a group of students, and (g) the percent of criticism directed toward a group of students.

Additional information was provided on the degree of relationship between the number of praise incidents and the number of criticism incidents.

PROCEDURE. Observations were of 57 teachers instructing in seventh- and eighth grade classrooms. Of the total, 15 were from the regular classrooms with a small class-size, 16 were from regular classrooms with a large class-size, 15 were special classroom teachers, and 11 were tutoring classroom teachers. One class period for each teacher was selected for observation, with the actual counting of praise and criticism incidents covering 30 minutes of the period. Fifteen schools participated in the study.

An analysis of variance (F-test) was performed on the data to determine the difference between the types of classrooms for each variable. A Pearson-r test was used to determine the degree of relationship between the number of praise incidents and the number of criticism incidents.

FINDINGS. Analysis of variance showed that no significant difference exists between the four types of classrooms for the seven variables. Also, no significant relationship was found between the number of praise incidents and the number of criticism incidents.

Although the majority of teachers used more praise than criticism, it was suggested that the teachers were not systematically using praise to manage student behavior. Rather, teacher praise and criticism was a reaction to student behavior.

Additional findings of the study showed that praise was equally distributed among boys and girls, but more criticism was directed toward boys than girls, and teachers directed more criticism than praise toward a group of students. A possible explanation for groups receiving more criticism than praise is that group misbehavior is more noticeable and requires the immediate attention of the teacher than an individual's misbehavior.

CONCLUSIONS AND RECOMMENDATIONS. The verbal praise and criticism behaviors of teachers in one type of classroom do not significantly differ from the verbal praise and criticism behavior of teachers in another type of classroom. Also, a significant relationship does not exist between the number of praise incidents and the number of criticism incidents.

To facilitate future research on teacher behavior as it occurs in different types of classroom settings, each teacher should be observed more than once and the results compared to check the consistency of the teacher's behavior. Also, statistical methods should be used to adjust the skewness of the data which may result when several teachers are observed.

Future research should observe other effective and ineffective teacher behaviors in different types of classrooms. It is quite possible that some teacher behaviors occur significantly more in one type of classroom than another. Future research should determine what factors cause one teacher to use a high frequency of praise or criticism and another teacher to use a low frequency of praise or criticism. Also, future research should compare the verbal praise and criticism behavior of first-year teachers with experienced teachers.

ACKNOWLEDGEMENTS

The research relating to teacher verbal praise and criticism behavior in this study does not represent the accomplishments of the author alone. The author takes pleasure in acknowledging the assistance of Sue Cseh, Pam Gregory, and Eugene Strowbridge (undergraduates who assisted in gathering data); Brother Gerald O'Neil (project advisor who also assisted in data collection), Kathleen Bonie, Kurth Lundell, Dr. Gordon Fuchs, Dr. Herman Torge, and Dr. Charles Kimble (research consultants); and Dr. Gordon Anderson and Dr. Joseph Watras (project committee members).

The author would achieve satisfaction from feeling he had more properly acknowledged a great debt if it were possible to name the school systems and their administrators, the schools and their principals, and most of all, the teachers who cooperated in allowing an observation to take place in their classroom. Unfortunately, this is not possible, since throughout the study it appeared necessary for the complete cooperation required by such research to guarantee that the data would be employed exclusively for research purposes and that complete anonymity of participants would be preserved. To the unnamed contributors, the author is deeply indebted.

Lastly, appreciation is expressed to the University of Dayton Graduate Studies and Research Council for the summer fellowship awarded to the author for his research project.

LIST OF TABLES

1. Coefficients Over a Four Week Period for Four Observers. 15

2. Summary of Observation Data for the Amount of Praise Incidents 20

3. Analysis of Variance for Data of Table 2 20

4. Summary of Observation Data for the Amount of Criticism Incidents. 22

5. Analysis of Variance for Data of Table 4 22

6. Summary of Data on the Ratio of Praise Incidents to Criticism Incidents. 24

7. Analysis of Variance for Data of Table 6 24

8. Summary of Observation Data on Coefficients of Equity of Praise for Boys and Girls. 26

9. Analysis of Variance for Data of Table 8 26

10. Summary of Observation Data on Coefficients of Equity of Criticism for Boys and Girls 28

11. Analysis of Variance for Data of Table 10. 28

12. Summary of Observation Data on the Percent of Group Praise 30

13. Analysis of Variance for Data of Table 12. 30

14. Summary of Observation Data on the Percent of Group Criticism. 32

15. Analysis of Variance for Data of Table 14. 32

LIST OF ILLUSTRATIONS

1. Number of Praise Incidents by Classroom 21

2. Number of Criticism Incidents by Classroom. 23

3. Ratio of Praise Incidents to Criticism Incidents by Classroom. 25

4. Coefficient of Equity for Praise by Classroom 27

5. Coefficient of Equity of Criticism by Classroom 29

6. Percentage of Group Praise by Classroom 31

7. Percentage of Group Criticism by Classroom. 33

TABLE OF CONTENTS

ACKNOWLEDGEMENTS. iii

LIST OF TABLES. iv

LIST OF ILLUSTRATIONS v

Chapter

I. INTRODUCTION 1

Problem Statement
Hypotheses for the Study
Importance of the Study
Definition of the Terms
Scope of the Study
Organization of the Remainder of the Report

II. REVIEW OF THE LITERATURE 8

III. METHOD 12

Subjects and Setting
Procedures
Data Processing and Analysis

IV. RESULTS AND DISCUSSION 19

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS. 40

APPENDIX 45

BIBLIOGRAPHY 48

CHAPTER I

INTRODUCTION

The increased concern by educational researchers for causal links between the process variables and the changes in student learning has resulted in new ways of understanding, explaining, and altering human learning (Bloom, 1980). Student time on-task is one of the variables that can be altered by the instructional process to cause positive consequences in student learning. Several researchers have indicated that student time on-task is positively related to student achievement and intelligence performance, and academic progress (Anderson, 1975; Arlin and Roth, 1978; Bloom, 1974; Cooley and Leinhardt, 1978; Fisher, Filby, Marliave, Cahen, Dishaw, Moore, and Berlinger, 1978; Good and Beckerman, 1978; Lahaderne, 1968; Luce and Hodge, 1978; Rist, 1970; Samuels and Turnure, 1974; Stallings and Kaskowitz, 1974; and, Stallings, Needles, and Staybrook, 1979). If increased student time on-task is a desirable goal, it is necessary for teacher behavior to promote it. Within the instructional process which affects student time on-task is the teacher's use of praise and criticism. Teacher praise for students is a contributing factor to increased student time on-task (Boyd, Keilbaugh, and Axelrod, 1981; Fagot, 1973; Hill and Strain, 1978; Marcy, 1977; Workman, Kindall, and Williams, 1980) while teacher criticism of students is negatively correlated with student time on-task (Fagot, 1973; Hamilton and Gordon, 1978; Madsen, Becker, Thomas, Koser, and Plager, 1968; Thomas, Becker, and Armstrong, 1968).

The current investigation is based on the finding that within the repertoire of teacher behaviors which can create a classroom environment which is conducive to learning is the application of social reinforcements for student behaviors. Specifically, positive reinforcements such as praise should be increased, while the negative consequences such as criticism should be decreased to minimum usage. Madsen, Becker, and Thomas (1968) suggested a 4:1 praise to criticism ratio yields the highest on-task behavior in students.

Problem Statement

While the use of praise has been identified as a desirable teacher behavior and the excessive use of criticism has been deemed an undesirable behavior, the extent to which these behaviors occur in various types of classrooms has not been investigated thoroughly. The primary aim of this investigation was to compare the verbal praise and criticism behavior of teachers instructing in different types of classrooms. The types of classrooms were the regular classroom with a small class-size, the regular classroom with a large class-size, the tutoring classroom, and the special classroom. Comparisons of the teachers in the four types of settings were made in terms of the number of verbal praise and criticism incidents occurring, the praise to criticism ratio, the equality of distribution of teacher verbal praise and criticism among boys and girls, and the percent of praise and criticism directed toward a group of students.

Additional information was provided on the degree of relationship between the number of praise incidents and the number of criticism incidents.

Hypotheses for the Study

Hypothesis 1. There will be no significant difference in the number of praise incidents occurring in the four types of classrooms.

Hypothesis 2. There will be no significant difference in the number of criticism incidents occurring in the four types of classrooms.

Hypothesis 3. There will be no significant difference in the praise to criticism ratio occurring in the four types of classrooms.

Hypothesis 4. There will be no significant difference in the coefficient of equity for praise in three types of classrooms (excluding the tutoring classroom).

Hypothesis 5. There will be no significant difference in the coefficient of equity for criticism in three types of classrooms (excluding the tutoring classroom).

Hypothesis 6. There will be no significant difference in the percent of praise being directed toward groups of students in three types of classrooms (excluding the tutoring classroom).

Hypothesis 7. There will be no significant difference in the percent of criticism being directed toward groups of students in three types of classrooms (excluding the tutoring classroom).

Hypotheses 1 and 2 generate a correlation hypothesis.

Hypothesis 8. There will be no significant difference between the number of praise incidents and the number of criticism incidents observed for the study.

A difference between the types of classrooms in the effects stated in the first seven hypotheses and the correlation for the eighth hypothesis will be significant if achieved at the .05 level of significance.

Importance of the Study

A scant amount of research has reported on certain teacher behaviors as they occur in various types of classrooms (i.e. special classroom, tutoring classrooms, regular classrooms with varying class-size). This study investigates four important aspects relating to teacher behavior. The first is the recording of the number of times verbal praise and verbal criticism are evidenced in different types of classrooms. The result of this research will aid in the development of hypotheses on the effects certain types of classrooms may have on teacher behavior. If a correlation between a type of classroom and the presence of an effective behavior is found, further study may identify the characteristics within the classroom which promote the effective teacher behavior.

The second feature of this study is the reporting on different aspects of teacher praise and criticism as they occur in different types of classrooms. Two of the aspects are teacher praise to criticism ratio and the precent of teacher praise and criticism directed toward groups of students. These areas have not been thoroughly investigated in past studies on teacher praise and criticism. Two other areas of teacher praise and criticism included in this report are the amount of praise and criticism used by teachers and the equality of distribution of praise and criticism among boys and girls. These areas have been covered in past research and the present study will serve to replicate their findings, plus provide new information on the occurrence of these aspects in a variety of classrooms.

The third feature of this study is the feedback which will be provided to the four groups of teachers concerning their verbal praise and criticism behavior. As stated above, this study will measure each group's number of praise and criticism incidents, the praise to criticism ratio, the equity of distribution of praise and criticism among boys and girls, and the percent of praise and criticism aimed at a group of students. The teachers' awareness of this information will encourage them to continue their appropriate teaching behavior, or, if necessary, to eliminate inappropriate behaviors or mannerisms. The available literature shows that inappropriate classroom teaching habits can be eliminated simply by making the teacher aware of what he or she is doing (see Brophy and Good, 1974).

A fourth feature of the study is the discovery of the degree to which there is a relationship between the number of praise incidents and the number of criticism incidents occurring in the classrooms observed for this study. If the degree of relationship is significant, further research may be performed on possible variables which contribute to the relationship.

Definition of the Terms

The following terms and definitions were used in this report.

Praise: Teacher verbal behavior which calls attention to student behavior that the teacher deems appropriate.

Criticism: Teacher verbal behavior which calls attention to student behavior that the teacher deems inappropriate.

Praise Incident: One or more praise statements that occur within seconds of each other and are directed toward the same appropriate student behavior.

Criticism Incident: One or more criticism statements that occur within seconds of each other and are directed toward the same inappropriate student behavior.

Praise to Criticism Ratio: The proportion of praise incidents to criticism incidents.

Equality of Distribution: The extent to which teachers give equal amounts of praise and criticism to boys and girls based upon the number of boys and girls in the classroom. Stated in the form of coefficients called "coefficients of equity."

Group: Two or more students.

Small Class-size: A class with five to fifteen students physically present.

Large Class-size: A class with twenty or more students physically present.

Regular Classroom: A setting in which the teacher has not received special training for any specific population (i.e. learning disabled or educable mentally retarded); nor have the students been selected on the basis of a specific diagnostic category (i.e. learning disabled or educable mentally retarded) (Hanley, 1970).

Special Classroom: Any classroom to which the students have been assigned on the basis of the diagnostic category of learning disabled.

Tutoring Classroom: Any instructional session involving one or two students with one professional teacher.

Scope of the Study

The study is delimited to observing teachers instructing seventh- and eighth-grade students. This delimitation of the study may restrict the generalizability of the findings.

Organization of the Remainder of the Report

A review of the literature related to this investigation is presented in Chapter II. The subjects, setting, and procedures used in the study are presented in Chapter III. The results are presented and discussed in Chapter IV. A summary of the study, conclusions, and recommendations for future studies are included in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a review of the research on teacher praise and criticism which is relevant to this investigation. The review includes four areas: (a) rates of approval and disapproval in seventh- and eighth-grade classrooms, (b) teacher interaction with learning disabled students in the special classroom, (c) teacher praise and criticism distribution among boys and girls, and (d) effects of class-size on teacher praise and criticism behavior.*

Rates of approval and disapproval in seventh- and eighth-grade classrooms. Few studies have been reported on the rates of teacher praise and criticism in seventh- and eighth-grade classrooms. Results by White (1975) showed that, over grade one to twelve, teacher verbal approval rates decreased and, in every grade after second, the rate of teacher disapproval exceeded the rate of verbal approval.

Thomas, Presland, Grant, and Glynn (1978) determined the rates of teacher verbal approval and disapproval in 10 seventh-grade classrooms and compared their results with those described by White (1975). Although there were differences in the observation techniques used and

*Topics connected with this study which are not included in the review of the literature are the interaction between tutors and tutees, and the correlation between amounts of praise and the amounts of criticism within classrooms. A literature search revealed that research has not been published in these areas.

the behavioral, cultural, and ethnic groups sampled, the results were similar. The majority of the teachers displayed individual rates of disapproval that were higher than their approval rates.

Heller and White (1975) performed a study of seventh-, eighth-, and ninth-grade classrooms to determine whether teachers' rates of approval and disapproval vary with the ability level of the class. Their results show that the rates of teacher disapproval were greater than the rate of approval in low and high ability classes.

In general, the studies on teachers' rates of approval and disapproval indicate that teachers use more disapproving behaviors (criticism) than approving behaviors (praise).

Teacher interaction with learning disabled students in the special classroom. A search of the literature shows that only one study focuses on teacher-student interaction in the special classroom. Bryan (1974) compared the task-oriented behavior and social interaction of third-grade learning disabled children in two educational settings. These settings were in the regular classroom and in sessions with the learning disability specialist. Her comparison shows that within the special classroom the learning disabled children spent significantly more time engaged in task-oriented behavior; spent a significantly greater proportion of time interacting with the teacher; and received a greater proportion of positive reinforcements and a smaller proportion of negative feedback in a variety of situations.

Teacher distribution of praise and criticism among boys and girls. Brophy and Good (1974) present an extensive review of the literature concerned with sex differences in classroom interaction patterns. The

studies, covering different grade levels, generally show that student interactions with the teacher involved boys more than girls. The difference was especially pronounced in the negative contacts involving teacher criticism directed at boys. More teacher criticism was directed at boys than girls. Despite this sex difference in teacher criticism, there appeared to be no difference in teacher praise.

Since 1974, studies have arrived at different conclusions than the studies reviewed by Brophy and Good (1974). Over a four month period, Etaugh and Harlow (1975) intermittently observed four teachers instructing fifth- and sixth-grade students in the regular classroom setting. The results show that the teachers directed more criticism to the boys than to the girls and praised boys more than girls. Dweck, Davidson, Nelson, and Enna (1978) concluded that boys and girls did not significantly differ in the amount of correction nor failure feedback given by teachers. This study was conducted in fourth- and fifth-grade classrooms.

Effects of class-size on teacher praise and criticism behavior. Shapson, Wright, Eason, and Fitzgerald (1978) examined experimentally the difference among four class-sizes ranging from 16 to 37 pupils. The study was performed in fourth- and fifth-grade classrooms in 11 schools. The frequency of teacher approval and disapproval was among 21 variables of teacher-pupil interaction observed in the classrooms. The data showed that none of the variables were affected by class-size. The conclusion was that class-size made no difference.

Summary

In this chapter, a review of the literature was presented on topics relevant to the present investigation. Very few studies in the literature deal directly with these topics. Three studies were concerned with teacher rates of approval and disapproval in the seventh- and eighth-grade classrooms. These studies showed that teacher rates of disapproval were greater than the rates of approval. Only one study has been performed on teacher-student interaction in the special classroom. However, the study compared the interaction of learning disabled children with the learning disability specialist and the regular classroom teacher. It did not compare the interaction between the learning disability teacher and learning disabled student with the interaction between the regular classroom teacher and nondisabled students. While many studies have been done on teacher distribution of praise and criticism among boys and girls, the results have been conflicting. Some studies show a significant difference in the distribution of praise and criticism among boys and girls, while another study concluded there is no significant difference. Only one study in the literature has examined the effect of class-size on teacher praise and criticism behavior. The results reveal that the class-size differences in the study had no significant effect on teacher behavior.

CHAPTER III

METHOD

Subjects and Settings

The subjects used in this study were 57 teachers instructing in seventh- and eighth-grade classrooms in urban and suburban schools. Of the total, 15 were from regular classrooms with a small class-size; 16 were from regular classrooms with a large class-size; 15 were special classroom teachers; and 11 were tutoring classroom teachers. One class period for each teacher was selected for observation with the actual counting of praise and criticism incidents covering 30 minutes of the period. The areas taught in the regular classrooms were English, mathematics, and social studies. The subjects taught in the special classrooms and tutoring classrooms varied from student to student because of the use of individualized instruction.

Procedures

Selection of schools and teachers. Fifteen schools within a twenty mile radius of the university (where the author was located) were chosen as possible participants in the study. The schools were chosen because of their proximity to the university. Because participation in the study was voluntary, permission to conduct observations was sought from the schools' superintendents, principals, or other appropriate personnel.

Once permission to conduct observations was granted, each school's principal was asked to arrange observations in four different types of classroom settings as defined by the study. It was emphasized that all teacher participation should be voluntary and the teachers must not know what will be observed in the classroom. The selection of teachers and the scheduling of observations was done by the principal of each school.

Behavior categories. A major activity of the investigation was to define the behavioral events to be observed. Teacher verbal feedback given to students involves simple and complex forms. Zahorik (1968) arrived at 14 categories of teacher verbal feedback behavior. The present investigation used two major categories of teacher verbal feedback behavior. These categories were praise and criticism.

For this study, teacher verbal praise was defined as teacher verbal behavior which calls attention to a student's or students' appropriate behavior. Teacher verbal criticism was defined in the same way except the teacher verbal behavior would call attention to a student's or students' inappropriate behavior. In each instance, appropriate and inappropriate behavior was defined by the teacher. A teacher did not have to specify what the appropriate or inappropriate behavior was when he or she praised or criticized.

Two additional terms were created for observational purposes. The terms were praise incident and criticism incident. A praise incident was defined as one or more praise statements that occurred within seconds of each other and were directed toward the same appropriate student behavior. A criticism incident was one or more criticism statements occurring within seconds of each other and directed

toward the same inappropriate student behavior. This investigation was a study of the number of praise and criticism incidents, not statements, occurring in different types of classrooms.

Observation and Recording. The total observation time for each teacher was one class period. Usually, a class period was 50 minutes long. The observer designated a 30 minute segment of the total observation time for counting the number of praise and criticism incidents. The 30 minute segment could have occurred at the beginning, middle, or end of the class period. An observer recording sheet appears in the Appendix. The observer used the recorder sheet by placing a tally mark in the proper category based upon the students that the praise or criticism incident involved - a male student, a female student, or a group of students. Only one tally was made for every praise or criticism incident. For example, if a teacher praised two girls, the observer would place a tally in the praise-group box because the teacher praised two students. The observer would place a tally in the female or male category (depending on the sex of the student) when an incident involved one student.

There was one observer in each class. The observers were instructed to sit in back of the classroom in a position that would maximize their observational range and would not disrupt any normal activity. Also, observers were instructed to avoid eye contact and interaction with the teacher during the class period.

Observer training and reliability. Three undergraduate students, one graduate student (the author), and one professor served as observers. All observers were from the School of Education. Observer training consisted of three phases. The first phase involved an introduction

to the project and its behavioral categories. In the second phase, the observers rated the same tape recording or video tape of a teacher for a certain period (usually five to ten minutes) and compared their ratings and discussed differences. The last training phase required weekly sessions for the duration of the study in which each observer viewed with the author a video tape of a teacher. From the video monitor, the observer and author viewed a ten minute segment of a teacher while recording the number of praise and criticism incidents occurring within the classroom. A divider separated the author from the other observer. Interreliability was computed from these weekly ratings.

The reliability between observers and the author is expressed in coefficients (Scott, 1955). The matrix of coefficient scores for the four weekly sessions is presented in Table 1. The range of scores was from .76 to .99. Reliability scores between the author and the other observers also were obtained during the initial phases of the study. It was required that coefficient score of .75 be achieved before an observer could observe in schools.

TABLE 1. --COEFFICIENTS OVER A FOUR WEEK PERIOD FOR FOUR OBSERVERS

	Weeks			
Observers	1	2	3	4
1	.94	.99	.95	.96
2	.76	.91	.82	.94
3	.82	.87	.94	.95
4	.87	.87	.94	.97

Data Processing and Analysis

The variables of teacher praise and criticism. This investigation was a study of teachers' verbal praise and criticism behavior as it occurs in four classroom settings. Seven variables of teacher praise and criticism were used as a basis for comparison of the four groups of teachers. These seven variables were (a) the number of praise incidents, (b) the number of criticism incidents, (c) the praise to criticism ratio, (d) the coefficient of equity of praise for boys and girls, (e) the coefficient of equity of criticism for boys and girls, (f) the percent of praise directed toward a group of students, and (g) the percent of criticism directed toward a group of students.

The number of praise/criticism incidents. The number of praise/criticism incidents was calculated by adding the number of incidents involving individual males, individual females, and a group of students.

The praise to criticism ratio. The ratio of praise to criticism incidents was calculated by dividing the number of praise incidents by the number of criticism incidents. For example, in a 30 minute period an observer recorded 21 praise incidents and seven criticism incidents. This teacher had a praise to criticism ratio of three to one, or 3:1.

The coefficient of equity of praise/criticism (after Sadker, Sadker, Bauchner, and Schmelzer, 1982). The equality of distribution of praise and criticism among boys and girls was presented in the form of coefficients of equity. A coefficient of equity was based upon the percent of males and females in the classroom and the percent of praise and criticism received by each group. The following explanation by Sadker, et al. (1982) illustrates the calculation of the coefficients

of equity.

> The following example illustrates the manner in which we calculate the distribution of attention between males and females in a particular classroom: A teacher praises students 10 times; five of the times the teacher praise is directed at girls. The girls are receiving 50% of the praise in that classroom. However, in our sample classroom there are 25 students; 10 boys and 15 girls. If the teacher's praise was given equitably, according to the percentage of class enrollment, you would expect that girls would receive 60% of the praise. Therefore, if you calculate the difference between the actual praise girls received (50%) and the unexpected praise (60%), you find girls received 10% less praise than expected given the number of females in the class. We call this difference between the expected and actual percentage of interaction the coefficient of equity. (p. 6)

The present investigation reports the coefficient of equity as a decimal. In the above example, the coefficient of equity was .10 in favor of boys. The boys received more praise than expected because the girls received 10% less praise than expected.

The percent of praise/criticism directed toward a group. The calculation of the percent of praise directed toward a group of students was performed by dividing the number of praise incidents directed toward a group by the total number of praise incidents. The same procedure was done, using criticism incidents, to determine the percent of criticism directed toward a group of students.

Analysis of variance. The results from the observations of teachers were categorized by the type of classroom and entered in a computer. The group total for each variable and an analysis of variance (F-test) was calculated by the computer.

An analysis of variance was performed on the four groups of teachers for the variables of (a) the number of praise incidents, (b) the number of criticism incidents, and (c) the praise to criticism ratio. An analysis of variance was executed on only three groups of

teachers (excluding the tutoring teachers) for the variables of (a) the coefficient of equity of praise, (b) the coefficient of equity of criticism, (c) the percent of praise directed toward a group, and (d) the percent of criticism directed toward a group. The exclusion of teachers in the tutoring setting was necessary because such classrooms frequently involve one student; therefore, limiting teacher interaction to a single sex category, and eliminating interaction with a group.

Relationship between the number of praise incidents and the number of criticism incidents. The degree of relationship between the number of praise incidents and the number of criticism incidents in the study was determined by using the Pearson-r as the correlational statistical procedure. The Pearson-r was performed on the total number of praise incidents and criticism incidents from the study. The total number of praise incidents was calculated by adding the number of praise incidents from each group of teachers. The number of criticism incidents for each group was summed to determine the total number of criticism incidents for the study.

CHAPTER IV

RESULTS AND DISCUSSION

An analysis of variance (F-test) was performed to test for significant differences between four types of classroom teachers using seven variables as a basis for comparison. Below are the types of classrooms by which the teachers were categorized and the variables used in the analysis.

Types of classrooms

1) Regular classroom with a small class-size
2) Regular classroom with a large class-size
3) Special classroom
4) Tutoring classroom

Variables

1) Number of praise incidents
2) Number of criticism incidents
3) Ratio of praise incidents to criticism incidents
4) Coefficient of equity of praise
5) Coefficient of equity of criticism
6) Percent of praise directed toward a group
7) Percent of criticism directed toward a group

The results for each variable are given in two tables. One table is a summary of the observation data for the variable and the other table is the results of the analysis of variance for the classroom data. Seven figures are used to illustrate the deviations within each type of classroom for the seven variables.

The Pearson-r was used to determine the degree of relationship between the number of praise incidents and the number of criticism incidents.

Results

Number of praise incidents. No significant difference was found in the number of praise incidents occurring in the four types of classrooms, F (3,53) = 2.063, p =.12(ns). Table 3 shows the results of the analysis of variance. The standard deviation for each type of classroom indicates a skewness in the data (see Table 2). The special classroom teachers had a standard deviation of 17.2 and a range of praise incidents from a minimum of five to a maximum of 68. The other types of classroom teachers had similar, but not as large, standard deviations and ranges. The ranges for each type of classroom is represented in Figure 1.

TABLE 2. --SUMMARY OF OBSERVATION DATA FOR THE AMOUNT OF PRAISE INCIDENTS

TYPE OF CLASSROOM	N	$\bar{X}$	SD	MIN. PRAISE	MAX. PRAISE
REGULAR WITH A SMALL CLASS-SIZE	15	17.6	16.3	1	60
REGULAR WITH A LARGE CLASS-SIZE	16	21.0	14.6	5	53
SPECIAL	15	22.9	17.2	4	68
TUTORING	11	32.5	13.4	5	52
TOTAL	57	22.8	16.0	1	68

TABLE 3. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 2

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	1502.3	3	500.8
WITHIN	12863.3	53	242.7
TOTAL	14863.3	56	F=2.063, p=.12

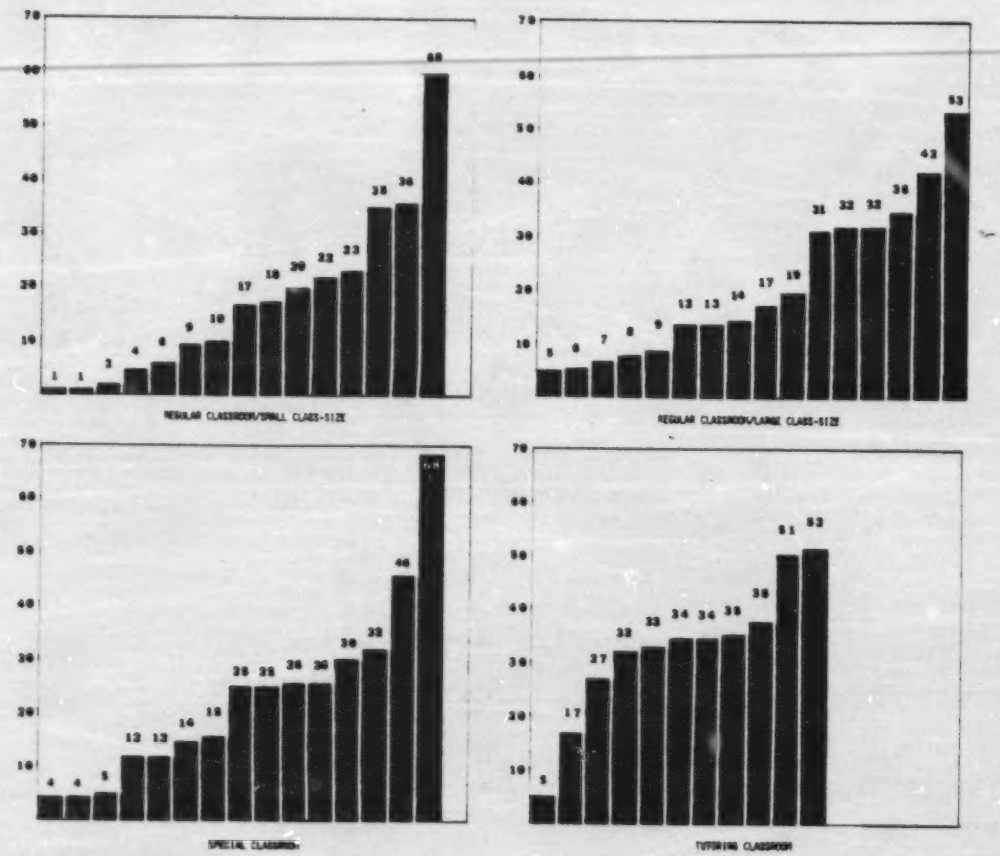

Figure 1. Number of Praise Incidents by Classroom

Number of criticism incidents. There was no significant difference in the number of criticism incidents occurring between the different types of classrooms, F (3,53) = .875, p = .46 (ns) (see Table 5). Table 4 indicates that the number of criticism incidents varied from two to 23 in the special classroom category and from two to 37 for the regular classrooms with a large class-size category. Figure 2 illustrates the extensive use of criticism by some teachers when they are compared to teachers who rarely use criticism.

TABLE 4. --SUMMARY OF OBSERVATION DATA FOR THE AMOUNT OF CRITICISM INCIDENTS

TYPE OF CLASSROOM	N	$\bar{x}$	SD	MIN. CRITICISM	MAX. CRITICISM
REGULAR WITH A SMALL CLASS-SIZE	15	10.7	8.4	1	31
REGULAR WITH A LARGE CLASS-SIZE	16	12.4	7.4	2	37
SPECIAL	15	15.1	6.9	2	23
TUTORING	11	11.5	8.4	2	29
TOTAL	57	12.5	7.8	1	37

TABLE 5. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 4

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	159.3	3	53.1
WITHIN	3214.9	53	60.7
TOTAL	3374.2	56	F=.875, p=.46

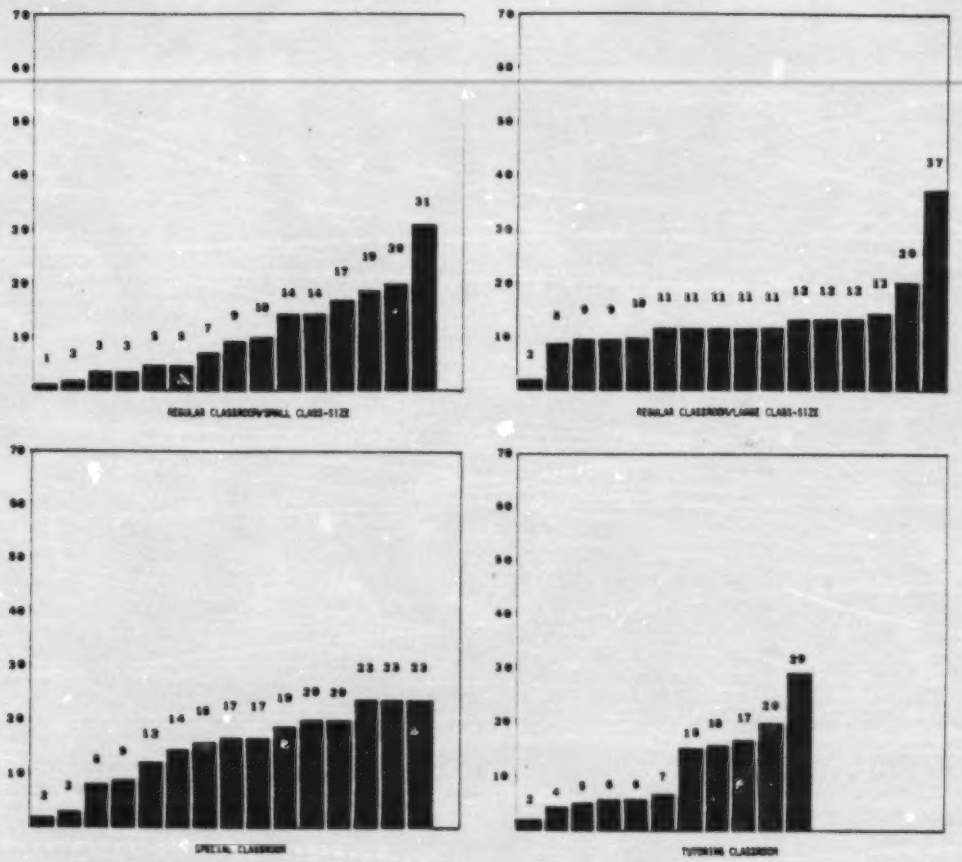

Figure 2. Number of Criticism Incidents by Classroom

Ratio of praise incidents to criticism incidents. No significant difference was found in the praise to criticism ratios of the four types of classrooms, F (3,53) = 1.64, p = .19 (ns). Table 7 shows the results of the analysis of variance for this variable. In Table 6, the group mean for each type of classroom suggests that praise incidents occurred twice or more often than criticism incidents. In the regular classrooms with a small class-size and the tutoring classrooms, the group mean was over 4:1. Figure 3 illustrates the variance of ratios for each type of classroom and shows that the means in Table 6

are skewed and not representative of what occurred in all classrooms. The mean in the regular classrooms with a small class-size was 4.8:1. However, Figure 3 shows that of the 15 teachers in this category nine teachers had a proportion of criticism incidents greater than praise incidents. While these teachers were well below the group mean, two teachers had ratios that were five times greater than the group mean. A special classroom teacher had a ratio six times above the mean for that group. These extreme deviations above or below the group mean occurred in all categories of classrooms.

TABLE 6. --SUMMARY OF DATA ON THE RATIO OF PRAISE INICIDENTS TO CRITICISM INCIDENTS

TYPE OF CLASSROOM	N	$\bar{x}^A$	SD	MIN. RATIO[A]	MAX. RATIO[A]
REGULAR WITH A SMALL CLASS-SIZE	15	4.8	6.7	.05	20.0
REGULAR WITH A LARGE CLASS-SIZE	16	2.1	1.6	.40	4.8
SPECIAL	15	2.2	3.0	.20	12.5
TUTORING	11	4.9	5.2	1.00	18.5
TOTAL	57	3.4	4.6	.05	20.0

[A]NUMBERS INDICATE THE PROPORTION OF PRAISE INCIDENTS TO ONE CRITICISM INCIDENT.

TABLE 7. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 6

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	99.1	3	33.0
WITHIN	1066.9	53	20.1
TOTAL	1166.9	56	F=1.641, p=.19

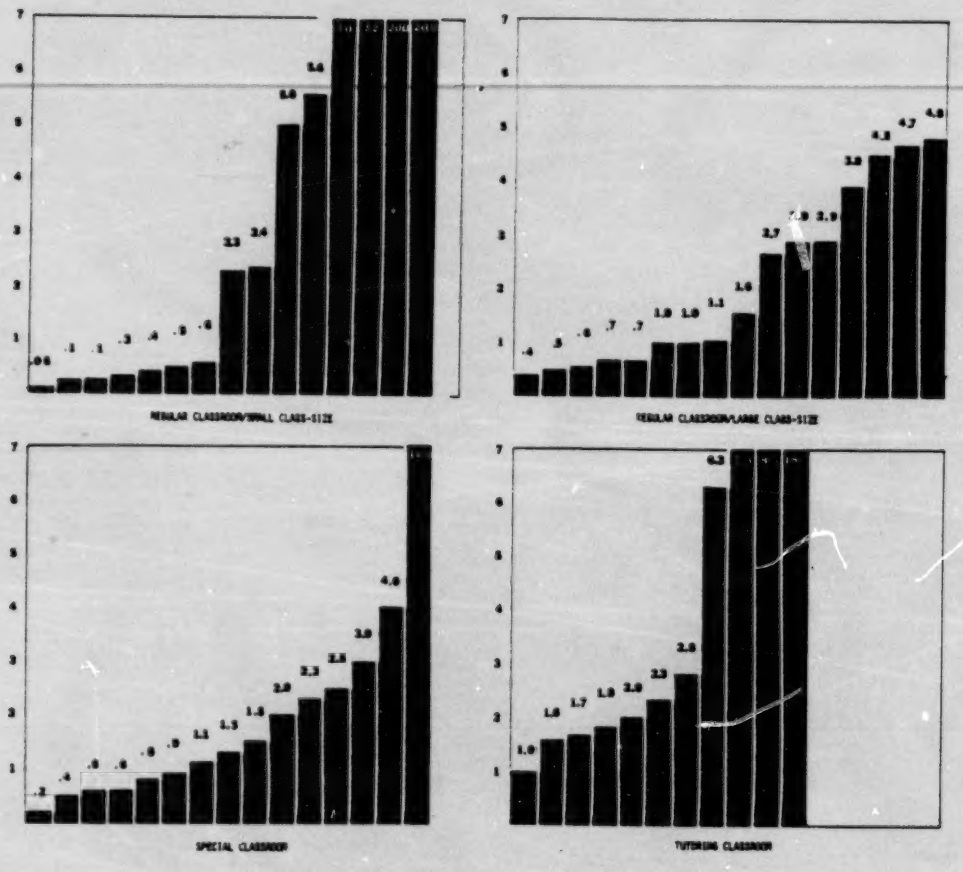

Figure 3. Ratio of Praise Incidents to Criticism Incidents by Classroom
Numbers represent the proportion of
praise incidents to one criticism incident.

Coefficient of equity for praise. No significant difference was found between the coefficient of equity for praise for three types of classrooms, F (2, 43) = 1.61, p = .21 (ns). Table 9 shows the results of the analysis of variance. Table 8 shows a wide range of coefficients of equity for the regular classrooms with a small class-size and regular classrooms with a large class-size. The former type of classroom had the widest range of coefficients. The coefficients for this group

ranged from an equal distribution of .00 to a distribution of .57. The special classroom teachers, as a group, had a more equal distribution of praise than the other groups of teachers (coefficient of equity, .11). Figure 4 illustrates the coefficients of equity by classroom and whether each coefficient favored male or female students. Of the 46 teachers in Figure 4, 19 teachers favored male students and 21 teachers favored female students. In the regular classrooms with a large class-size, teachers with coefficients above the group mean tended to give males more praise than expected. Two teachers in the regular classrooms with a small class-size gave females over .50 more praise than expected.

TABLE 8. --SUMMARY OF OBSERVATION DATA ON COEFFICIENTS OF EQUITY OF PRAISE FOR BOYS AND GIRLS

TYPE OF CLASSROOM	N	$\bar{X}$	SD	MIN. COEF.	MAX. COEF.
REGULAR WITH A SMALL CLASS-SIZE	15	.18	.19	.57	.00
REGULAR WITH A LARGE CLASS-SIZE	16	.20	.14	.47	.01
SPECIAL	15	.11	.10	.29	.00
TUTORING	—	—	—	NOT APPLICABLE	—
TOTAL	46	.17	.15	.57	.00

TABLE 9. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 8

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	.070	2	.035
WITHIN	.937	43	.021
TOTAL	1.007	45	F=1.611, p=.21

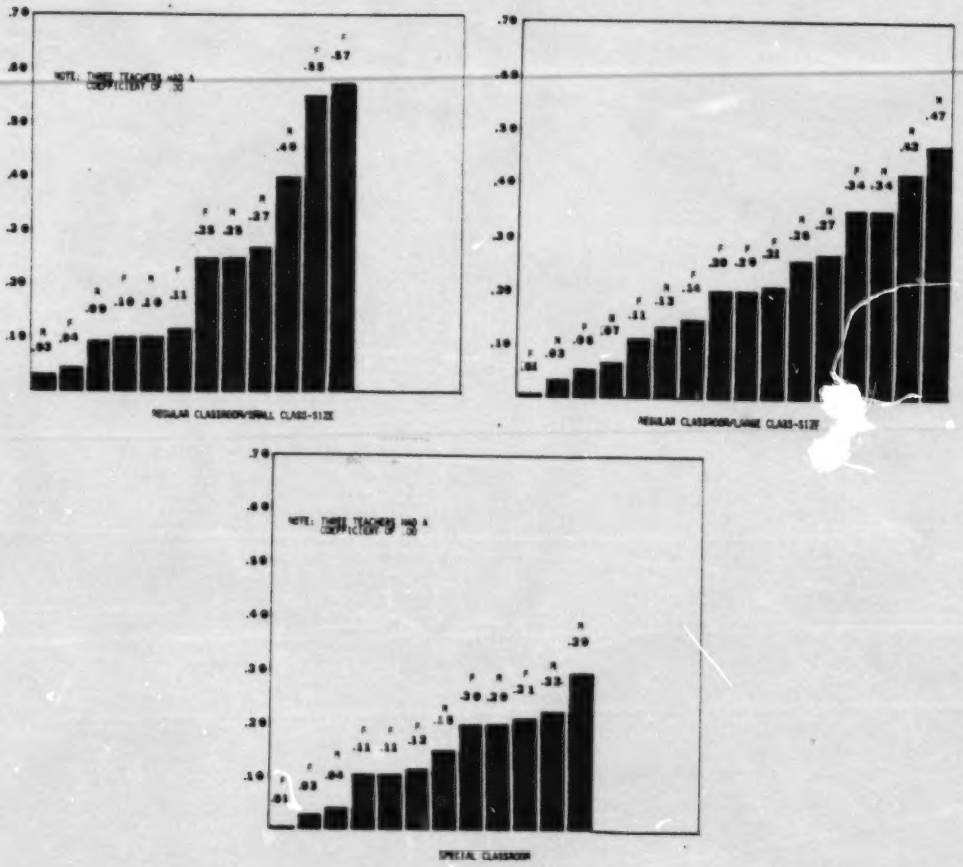

Figure 4. Coefficient of Equity for Praise by Classroom
M = coefficient is in favor of male students;
F = coefficient is in favor of female students

Coefficient of equity for criticism. The coefficients of equity for criticism in the three types of classrooms did not significantly differ from each other, F (2,43) = 2.59, p = .09 (ns). Table 11 shows that the level of significance for this variable is .09. This is the highest level of significance for the study. Table 10 shows that the standard deviations were high for all types of classrooms. All types of classrooms had a maximum coefficient of .00 and the lowest minimum coefficient was .40 by the special classroom teachers. Figure 5

illustrates the equality of the distribution of criticism by classroom and the sex of the student which the coefficient favored. Of the 46 teachers represented in the graphs, 31 teachers criticized male students, nine teachers criticized female students, and six teachers had equal distributions. The teachers in the regular classrooms with a large class-size had the lowest coefficients of equity. In this group, the 11 teachers with coefficients above .18 favored male students.

TABLE 10. --SUMMARY OF OBSERVATION DATA ON COEFFICIENTS OF EQUITY OF CRITICISM FOR BOYS AND GIRLS

TYPE OF CLASSROOM	N	$\bar{x}$	SD	MIN. COEF.	MAX. COEF.
REGULAR WITH A SMALL CLASS-SIZE	15	.23	.16	.55	.00
REGULAR WITH A LARGE CLASS-SIZE	16	.26	.15	.56	.00
SPECIAL	15	.14	.13	.40	.00
TUTORING	—	—	—	NOT APPLICABLE	—
TOTAL	46	.21	.15	.56	.00

TABLE 11. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 10

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	.113	2	.056
WITHIN	.933	43	.022
TOTAL	1.044	45	F=2.59, p=.09

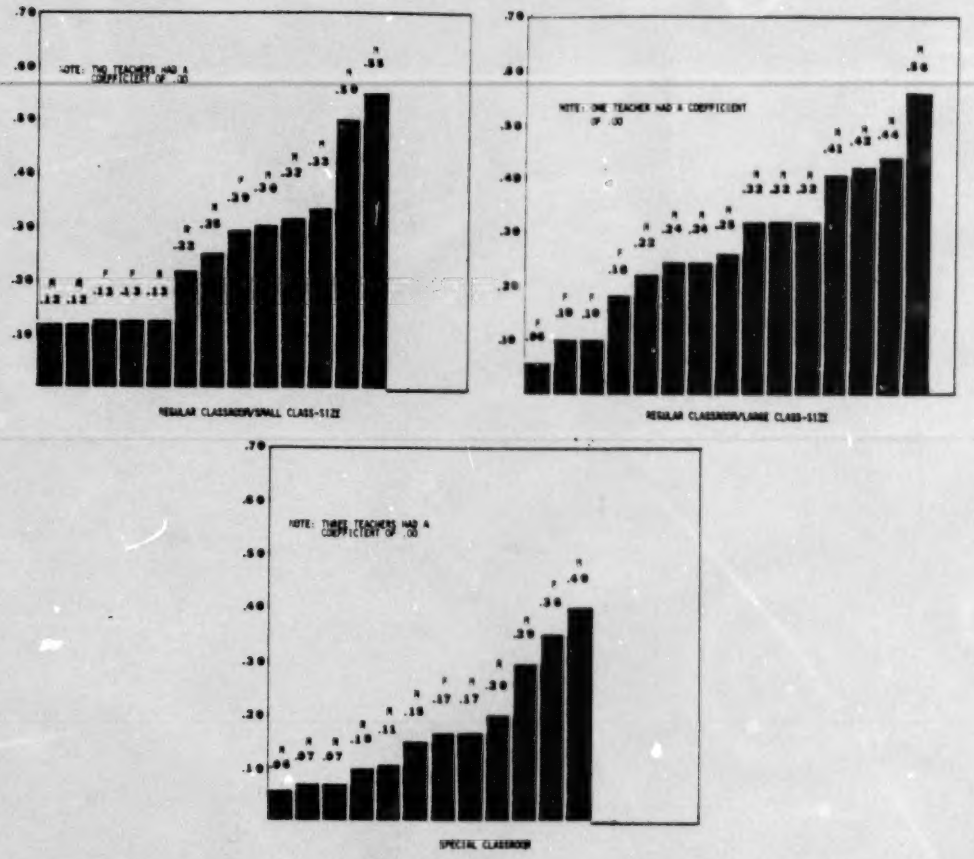

Figure 5. Coefficient of Equity of Criticism by Classroom
M = coefficient is in favor of male students
F = coefficient is in favor of female students

Percent of praise directed toward a group. The three types of classrooms did not significantly differ in the percent of praise directed toward a group, F (2,43) = 2.45, p = .10 (ns) (see Table 13). Table 12 shows that special classroom teachers distribute the least amount of group praise (.03). Figure 6 illustrates the percentage of group praise by classroom. There were 24 teachers who did not praise a group of students. In the special classrooms, 10 teachers out of 15 did not give group praise. The highest group praise percentages were in the

regular classrooms with a large class-size where four teachers gave 20% of their total amount of praise to groups of students.

TABLE 12. --SUMMARY OF OBSERVATION DATA ON THE PERCENT OF GROUP PRAISE

TYPE OF CLASSROOM	N	$\bar{X}$	SD	MIN. GRPR.	MAX. GRPR.
REGULAR WITH A SMALL CLASS-SIZE	15	.07	.12	.00	.42
REGULAR WITH A LARGE CLASS-SIZE	16	.13	.16	.00	.46
SPECIAL	15	.03	.06	.00	.20
TUTORING	—	—	NOT APPLICABLE		—
TOTAL	46	.08	.12	.00	.46

TABLE 13. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 12

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	.068	2	.034
WITHIN	.598	43	.014
TOTAL	.667	45	F=2.45, p=.10

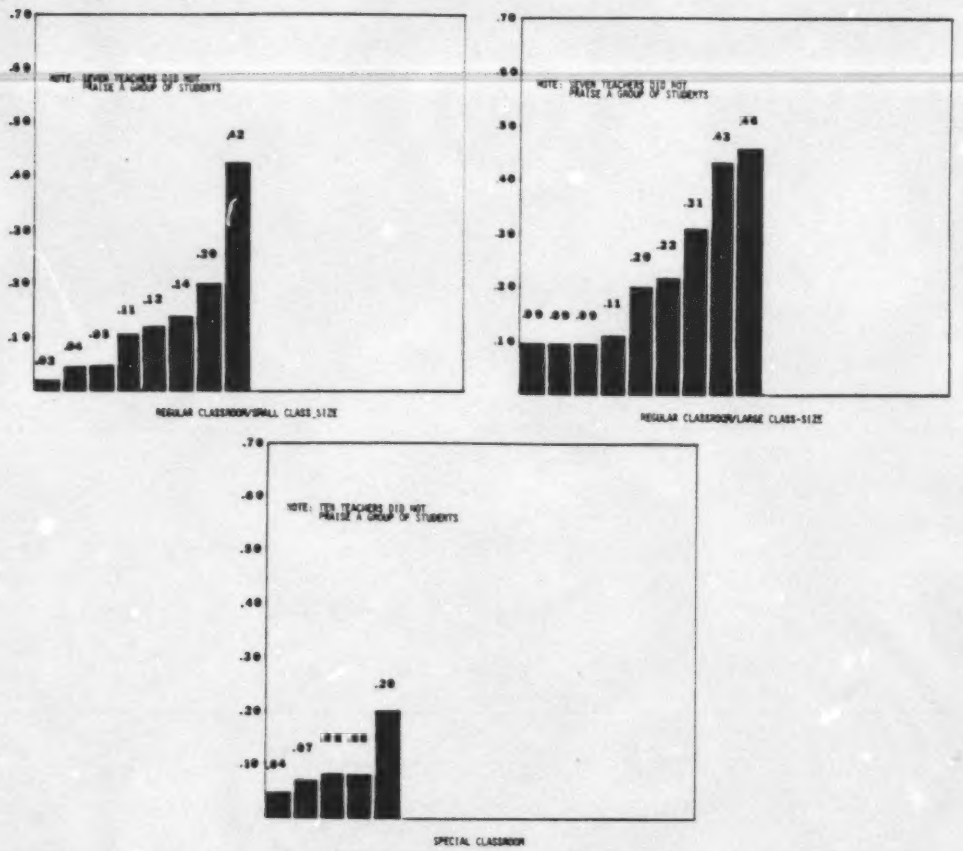

Figure 6. Percentage of Group Praise by Classroom

Percent of criticism directed toward a group. Teachers in the three types of classrooms did not significantly differ in the percent of criticism directed toward a group, F (2,43) = 1.90, p = .16 (ns) (see Table 15). As shown in Table 14, the teachers in the regular classrooms with a small class-size had the highest standard deviation and range of percentages. The maximum percentage for this group was .71 and the minimum percentage was the same as the other groups, .00. The highest group mean was .24 by the teachers in regular classrooms with a large class-size. Figure 7 illustrates the group criticism

percentages by classroom. The differences between percentages within the regular classrooms with a small class-size is evident in the graph. There were eight teachers in the group who did not employ criticism toward groups and four teachers who directed .40 or more of their criticism toward a group. The variance of the percentages in the regular classrooms with a large class-size is smaller than the variance within the other types of classrooms.

TABLE 14. --SUMMARY OF OBSERVATION DATA ON THE PERCENT OF GROUP CRITICISM

TYPE OF CLASSROOM	N	$\bar{X}$	SD	MIN. GRCR.	MAX. GRCR.
REGULAR WITH A SMALL CLASS-SIZE	15	.18	.25	.00	.71
REGULAR WITH A LARGE CLASS-SIZE	16	.24	.12	.00	.44
SPECIAL	15	.11	.13	.00	.38
TUTORING	—	—	NOT APPLICABLE		—
TOTAL	46	.18	.18	.00	.71

TABLE 15. --ANALYSIS OF VARIANCE FOR DATA OF TABLE 14

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARES
BETWEEN	.120	2	.06
WITHIN	1.366	43	.03
TOTAL	1.486	45	F=1.90, p=.16

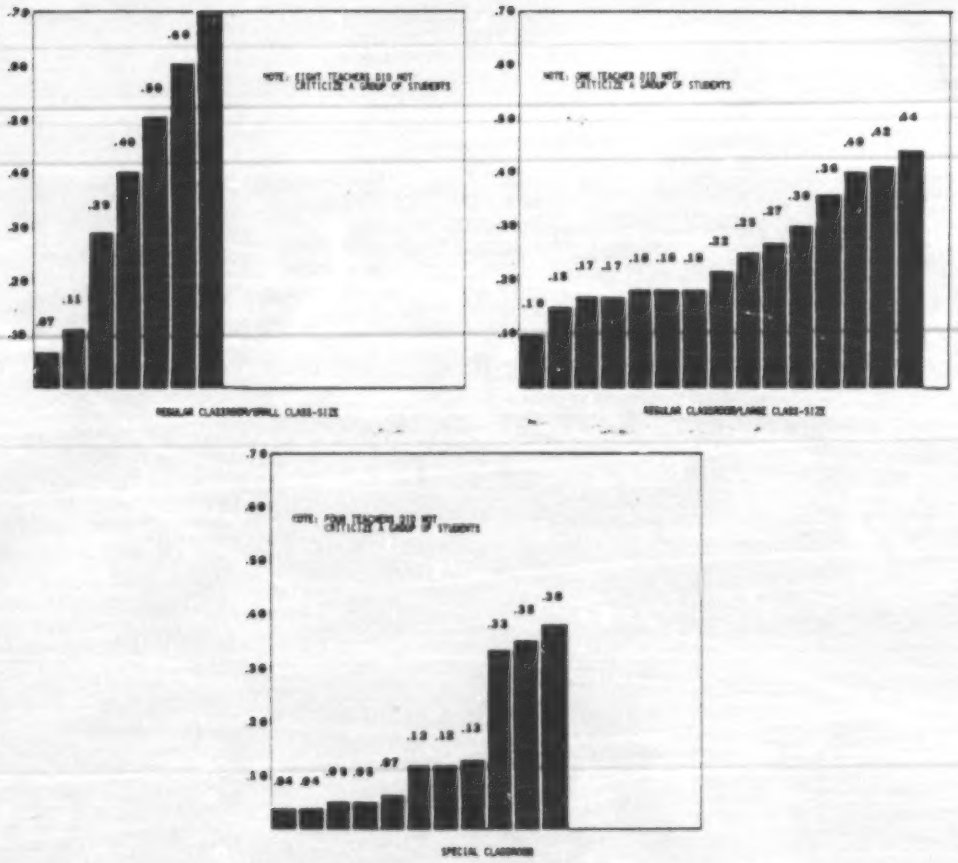

Figure 7. Percentage of Group Criticism by Classroom

Relationship between the number of praise incidents and the number of criticism incidents. No significant relationship was found between the number of praise incidents and the number of criticism incidents in the study, r (57) = .046, p = .37 (ns). The mean for the total number of praise incidents occurring in the study was 22.8 with a standard deviation of 16. The mean for the total number of criticism incidents for the study was 12.5 with a standard deviation of 7.8.

Discussion

The present investigation provides a look at seven variables of teacher praise and criticism as they occurred in four types of classrooms. An analysis was performed to determine if the variables differed among the types of classrooms. The analysis showed that there is no significant difference between the types of classrooms for each variable. Also, a test for correlation showed that no significant relationship exists between the number of praise incidents and the number of criticism incidents. Such findings indicate that the type of classroom does not significantly affect the verbal praise and criticism behavior of teachers. They also indicate praise and criticism occur independently of each other. The hypotheses of the study failed to be rejected.

The wide range of praise and criticism incidents within all types of classrooms suggests that the majority of the teacher praise and criticism in the study was a reaction to student behavior rather than an attempt to modify student behavior through the use of praise. If the suggestion by Madsen et al. (1968), that a praise to criticism ratio of 4:1 yields the highest on-task behavior in students, is used as a measure of whether teachers are using praise and criticism as behavior

modifiers, 15 of the 57 teachers in the study are doing so. Assuming the sample of teachers are reasonably representative, and that teacher praise is important in maintaining student on-task behavior, it appears that teachers are not fully utilizing a very important tool of reinforcement.

These findings can be interpreted in several ways. The first interpretation is that teachers are using other reinforcers, besides verbal praise, to maintain student on-task behavior. The use of verbal praise could be effective for some teachers, thus reinforcing the teacher and causing him/her to increase the use of praise. It could also be surmised that for the teachers who do not use verbal praise effectively, the number of praise incidents are likely to decrease because of negative results. Teachers who do not effectively use verbal praise must employ other means to maintain student on-task behavior.

Another interpretation is not that teachers are using praise ineffectively, but that praise is ineffective as a reinforcer of junior high student behavior. Brophy (1981) presents an excellent argument against the use of praise by teachers. The low praise to criticism ratios by teachers in the present study may suggest that while they view praise as important, as found by Zahorik (1980), their behavior in the classroom suggests that praise is not an important part of the teaching process.

A third interpretation is that praise is effective as a reinforcer, but at a lower ratio than suggested by Madsen et al. (1968). After summarizing principles derived from learning/reinforcement theory and other principles to maintain student task orientation, Brophy (1981) suggests the following:

> These guidelines indicate that praise cannot be overused if it is to be used effectively, and that some investment of time and attention to the specifics of performance or conduct of the student is required. The rapid pace of classroom life and the many competing demands on the teacher minimize the availability of such time. To me at least, this seems to underscore the need for teachers to praise <u>well</u>, rather than necessarily <u>*often*</u>, at least after the elementary grades. (p. 25)

Therefore, the effectiveness of verbal praise may not be found in the ratio of praise to criticism, but in the quality of verbal praise.

Still a fourth interpretation, already mentioned, is that teacher praise and criticism is a reaction to student behavior, as described by Brophy and Good (1974):

> That is, individual differences in students make differential impressions on teachers and condition them to respond differentially. Most differential teacher behavior toward students appears to be of the reactive variety. Apparently, as Jackson (1968) has vividly described, the pace of classroom interaction is so rapid, and the teacher is so continually bombarded with complex and sometimes conflicting demands, that he may be able to do nothing more than simply react just to keep up. Despite occasional attempts to portray the teacher as an absolute monarch autocratically dominating his students, observational research by ourselves and others more often picture him as someone frantically trying to keep up with events over which he has only partial control. Thus, most of the teacher's behavior is reactive; relatively little of it is proactive in the sense that it reflects his deliberate planning and control. (p. 230)

This interpretation is supported by the lack of a significant relationship between the number of praise incidents and criticism incidents in the present study. If teachers were using a well thought-out reinforcement system, which maximized the use of praise and minimized the use of criticism in order to increase or even maintain student on-task behavior, there would have been a negative correlation between praise and criticism. As the correlation coefficient for the study showed, praise incidents and criticism incidents were occurring independent of each other.

The findings indicate that the majority of teachers used more praise than criticism. More praise than criticism was used by 39 of the 57 teachers. This finding is contrary to the results of Heller and White (1975), Thomas et al. (1978), and White (1975). It is conceivable that the results from the present study may not be representative of what occurs in a cross section of classrooms. The teachers were not randomly selected, but chosen by the principal of the school. For whatever reason, it is possible that the principals selected teachers likely to praise more than criticize. However, this occurrence was not probable because it was requested that the principal arrange four observations of different classroom teachers consecutively, and few classrooms had less than 15 students. These two factors limited the number of teachers from which the principal could choose from. Also, most of the schools had one special classroom teacher and one tutor therefore removing the factor of the principal's choice in these schools. Another way the results of the study could be biased, and not representative of what occurs in junior high classrooms, is that teachers were notified ahead of time of when the observation would take place. Samph (1968) found that teachers used more praise than criticism when prior notification of an observation was followed by an observer's presence. Ligon and Doss (1982) suggest that, from their 6,500 hours of classroom observation, notification of teachers of the exact date of an observation could bias the data.

The findings on the equality of distribution of praise and criticism shows that praise in three types of classrooms did not favor one sex over the other. However, the distribution of criticism favored the male students. These results are congruent with the results from

the studies reviewed by Brophy and Good (1974). A reason why boys received more criticism than girls could be based on the finding by Maccoby (1966) that boys tend to be more active and assertive than girls. Therefore, boys are more forceful in asserting themselves and gaining the teacher's attention. Criticism is attention, even though negative, and could reinforce boys' "active" behavior.

The results of the special classroom teachers for the coefficients of praise and criticism shows that three of the 15 teachers had an equal distribution of praise and criticism. Closer examination of the observation data reveals that the three teachers did not have any females in their class. When the coefficient of equity formula was applied to these teachers, the equality of distribution was .00. However, it cannot be known whether these teachers would have an equal distribution if females were enrolled in their classes.

The results of the percent of praise and criticism given to a group of students suggests that the type of classroom does not significantly affect verbal recognition of group behavior. Generally, teachers gave more attention to inappropriate, than appropriate, group behavior. A higher percentage of group criticism could be the result of the necessary immediate action which must be taken by the teacher when a group of students is misbehaving. More than likely, a group of students demonstrating inappropriate behavior is disrupting the teaching-learning process in a more noticeable way than if one student was exhibiting inappropriate behavior. The teacher must stop the disruption caused by the group of students in order to continue to teach. The immediate termination of the inappropriate behavior rewards the teachers in their role as classroom manager. Giving praise to appropriate group behavior

may not be particularly reinforcing for teachers because it does not immediately result in any outcome that is obvious to the teacher.

If teachers are reinforced by the immediate termination of negative group behavior and therefore likely to increase the use of criticism toward a group of students, why didn't the majority of teachers distribute more criticism than praise toward individual students? A hypothesis is that the misbehavior of a student may not be as noticeable as group inappropriate behavior. In other words, individual misbehavior may not always be seen by the teacher, but group inappropriate behavior does not easily go unnoticed. A similar hypothesis is that individual misbehavior can more easily be ignored than group misbehavior. So while a teacher may have noticed inappropriate behavior by a student, the teacher may choose to ignore it. But group inappropriate behavior is not likely to be ignored.

The teachers in the regular classroom with a large class-size gave a higher percent of their praise and criticism to groups of students than did the other types of classroom teachers. This may reflect the tendency of teachers to instruct groups, rather than individuals, in a large class-size setting.

The special classroom teachers gave a small percent of their praise and criticism to a group of students which may reflect their individualized approach to teaching learning disabled students.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Purpose. The comparison of the verbal praise and criticism behavior of teachers in four types of classroom teachers was the major purpose of this study. Research has demonstrated that praise is an effective teacher behavior and criticism is an ineffective teacher behavior, but the extent to which these behaviors occur in different types of classrooms has not been thoroughly studied. The primary aim of this investigation was to observe seven variables of teacher verbal praise and criticism in four types of classrooms and calculate the variance among classrooms for each variable. Another purpose of the study was to determine the degree of relationship between the number of praise incidents and the number of criticism incidents which occurred in the study.

Design and conduct. The study was conducted with 57 teachers instructing seventh- and eighth-grade students. The number of teachers were composed of 15 teachers from regular classrooms with a small class-size, 15 regular classrooms with a large class-size, 15 special classroom teachers, and 11 teachers from tutoring classrooms. Fifteen schools participated in the study.

The teachers were selected and scheduled for an observation through the principal of the school. The principal was asked not to inform the teachers of the purpose of the observation.

Each teacher was observed for one class period from which 30 minutes was designated for actual recording of data. The data consisted of seven variables of praise and criticism. The variables were the number of praise incidents, the number of criticism incidents, the ratio of praise incidents to criticism incidents, the coefficient of equity for praise, the coefficient of equity for criticism, the percent of praise directed toward a group of students, and the percent of criticism directed toward a group of students.

Observer reliability was computed weekly for four observers. Also, a reliability coefficient of .75 was required before an observer participated in actual observation.

Analysis of data. Analysis of variance showed no significant difference between the four types of classrooms for the variables of the number of praise incidents, the number of criticism incidents, and the ratio of praise incidents to criticism incidents.

Analysis of variance showed no significant difference for three types of classrooms (excluding the tutoring classrooms) for the variables of the coefficient of equity for praise, the coefficient of equity for criticism, the percent of praise directed toward a group, and the percent of criticism directed toward a group.

Bar graphs were used to illustrate deviations within each type of classroom for the seven variables.

No significant relationship was found between the number of praise incidents and the number of criticism incidents.

The majority of teachers used more praise than criticism.

Praise was equally distributed among boys and girls, but more criticism was directed toward boys than girls.

Teachers directed more criticism than praise toward a group of students.

Evaluation of the findings. The type of classroom does not significantly affect teacher verbal praise and criticism behavior.

The wide variance of the number of praise and criticism incidents in the study, the lack of a significant relationship between praise incidents and criticism incidents, and the low praise to criticism ratios used by teachers suggests that most teacher verbal praise and criticism is a reaction to student behavior and not an attempt to sustain or increase student on-task behavior.

Teachers are more likely to verbally call attention to group inappropriate behavior than appropriate behavior. A possible explanation for this finding is that group misbehavior usually creates a noticeable distraction in the teaching process which needs the immediate attention of the teacher. Also, teachers receive immediate reinforcement when misbehavior by the group is stopped; therefore, the teacher is likely to increase the use of criticism.

There is a tendency for teachers to direct more criticism toward boys than girls. It is possible that boys are more assertive than girls in a situation which may require more of the teacher's attention to be directed toward boys. This attention, in turn, possibly reinforces male assertiveness.

Conclusions

The present investigation observed certain teacher behaviors (praise and criticism) in several types of classrooms. The results showed that the type of classroom did not significantly affect the

occurrence of the teacher behaviors. In order to facilitate future research on teacher behavior as it occurs in different settings, each teacher should be observed more than once and the results compared to check the consistency of the teacher's behavior. It may be that until teachers become comfortable with the presence of an observer, the behavior might be guided by what they think the observer wants to see or should see rather than what the teacher usually does without the observer present. A skewness in the number of praise and criticism incidents in the present study may have been caused by teacher reactions to the presence of the observer. Also, future research will be facilitated if statistical methods are used to adjust the skewness of data which may result when several teachers are observed.

This investigation provides feedback to teachers on their verbal praise and criticism behavior. There are five major findings of this study for teachers of seventh- and eighth-grade students.

1. Teachers in one type of classroom do not significantly praise or criticize more or less than teachers in another type of classroom.

2. The majority of teachers use more praise than criticism.

3. Teachers use low praise to criticism ratios when compared to the 4:1 praise to criticism ratio recommended by Madsen et al. (1968).

4. Teachers distribute praise equally to boys and girls, but boys receive more criticism than girls.

5. Teachers have a tendency to direct more criticism than praise toward a group of students.

Recommendations

There are several empirical questions that have emerged from this investigation and which future research should endeavor to answer.

1. Other studies should observe effective and ineffective teacher behaviors in different types of classrooms. It is quite possible that some teacher behaviors occur significantly more in one type of classroom than another.

2. Future research should determine the extent to which teachers are reacting to student behavior with praise and criticism or systematically using praise and criticism to manage student behavior.

3. Future research should determine what factors cause one teacher to use a high frequency of praise or criticism and another teacher to use a low frequency of praise or criticism.

4. The low praise to criticism ratios and the wide variance of the number of praise and criticism incidents in this study may suggest that some teachers praise well rather than often. Future research should determine the extent to which teachers praise well rather than often.

5. The present study found that teachers direct more criticism than praise toward a group of students, but more praise than criticism toward individual students. Future studies should examine what teacher behaviors should be directed more or less to a group of students than to individual students.

6. Future research should examine the differences in teacher verbal praise and criticism behavior of beginning teachers and experienced teachers.

APPENDIX

Observer Recording Sheet

DATE:

GRADE:

MALE STUDENTS.

SCHOOL:

TYPE OF CLASS:

FEMALE STUDENTS:

OBSERVATION TIME:

SEX OF TEACHER:

NUMBER OF STUDENTS:

SUBJECT:

	MALE	FEMALE	GROUP	TOTAL
PRAISE				
CRITICISM				

NOTES

OBSERVER:

SUMMARY OF OBSERVATION

Number of praise incidents:

Number of criticism incidents:

Praise to criticism ratio:

Coefficient of equity for praise and criticism

Percent of boys in class:

Percent of praise directed toward boys:

Coefficient of equity for praise :

Percent of criticism directed toward boys:

Coefficient of equity for criticism :

Percent of girls in class:

Percent of praise directed toward girls:

Coefficient of equity for praise :

Percent of criticism directed toward girls:

Coefficient of equity for criticism :

Percent of praise directed toward groups:

Percent of criticism directed toward groups:

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